Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	272	yoon-k\$.in.	US-PGPUB; USPAT	OR	ON	2005/02/21 15:45
1.2	45	yoon-kwang\$.in.	US-PGPUB; USPAT	OR	ON	2005/02/21 15:52
L3	3	"423945".ap.	US-PGPUB; USPAT	OR	ON	2005/02/21 15:51
L4	75	song-ki\$.in.	US-PGPUB; USPAT	OR	ON	2005/02/21 15:53
L5	249489	resist	US-PGPUB; USPAT	OR	ON	2005/02/21 15:53
L6	8	4 and 5	US-PGPUB; USPAT	OR	ON	2005/02/21 15:53
L7	2	6 not 2	US-PGPUB; USPAT	OR	ON	2005/02/21 15:53

all youn + Fin Title

6860418 10/3428 6844134 423945

Search History 2/21/05 3:54:28 PM Page 1

10/719,651 Dates Not Soul 1

```
ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
L8
AN
     2005:120982 CAPLUS
DN
     142:156540
     Manufacture of fluorine-containing compounds, fluorine-containing
TΙ
     polymers, and resist compositions therewith
IN
     Takebe, Yoko; Kaneko, Isamu
     Asahi Glass Company, Limited, Japan
PΑ
SO
     PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     Japanese
FAN.CNT 1
                                            APPLICATION NO.
                                                                    DATE
                        KIND
                                 DATE
     PATENT NO.
                         ----
                                              ______
     _____
                                 -----
                                 20050210 WO 2004-JP10856 20040729
     WO 2005012372
PΙ
                         A1
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KŻ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
PRAI JP 2003-284156
                           Α
                                 20030731
                                 20040325
     JP 2004-88337
                           Α
AB
     A fluorine-containing polymer is disclosed which has a functional group and
     exhibits high transparency over a wide wavelength range. Also disclosed
     is a resist composition composed of such a fluorine-containing polymer. A
     fluorine-containing polymer (A) has a monomer unit wherein a
fluorine-containing
     diene represented by the formula (1) below is polymerized A method for
     producing the fluorine-containing polymer (A) and a resist composition using
the
     fluorine-containing polymer (A) as the base material are also disclosed.
     = CFCH2CH-Q-CH2CH = CH2 (1) In the above formula, Q represents
     (CH2)aC(CF3)2OR4 (wherein a is an integer of 0-3, and R4 represents an
     alkyl group having 20 or less carbon atoms which may have an ether oxygen
     atom, a fluorine-containing alkyl group, an alkoxycarbonyl group having 6 or
     less carbon atoms, or CH2R5 (wherein R5 is an alkoxycarbonyl group having
     6 or less carbon atoms)), or (CH2)dCOOR6 (wherein d is 0 or 1, and R6
     represents an hydrogen atom, an alkyl group having 20 or less carbon atoms
     or a fluorine-containing alkyl group).
IT
     795298-39-4P
     RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical
     process); PYP (Physical process); TEM (Technical or engineered material
     use); PREP (Preparation); PROC (Process); USES (Uses)
        (ring-closing; manufacture of fluorine-containing compds.,
fluorine-containing
        polymers, and resist compns. therewith)
RN
     795298-39-4 CAPLUS
     4-Pentenoic acid, 4,5,5-trifluoro-2-(2-propenyl)-, 1,1-dimethylethyl
CN
     ester, homopolymer (9CI) (CA INDEX NAME)
     CM
          1
     CRN
         795298-38-3
```

CMF C12 H17 F3 O2

ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN rs

AN 2004:652509 CAPLUS

DN 141:197358

Photosensitive polymer including fluorine, resist composition containing TТ the same and patterning method using the resist composition

Yoon, Kwang-Sub; Song, Ki-Yong IN

PA S. Korea

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT Patent

LΑ English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO. CU DATE
ΡI	US 2004157151	A1	20040812	US 2003-719651 20031121
PRAT	KR 2002-73051	Δ	20021122	(' /

A photosensitive polymer including fluorine, a resist composition containing AΒ the

same and a patterning method for IC fabrication using the resist composition are provided. The photosensitive polymer having at least one selected from the group consisting of fluorine-substituted or unsubstituted alkyl ester, tetrahydropyranyl ester, tetrahydrofuranyl ester, nitrile, amide, carbonyl and hexafluoro alkyl having a hydrophilic group, and a trifluorovinyl derivative monomer as a repeating unit and having a weight

mol. weight of about 3,000 to about 100,000. The photosensitive polymer exhibits high transmittance for a light source of F2 (157 nm), high dry etching resistance, and has characteristics suitable to realize an unitrafine pattern size.

736996-80-8P 736996-81-9P 736996-82-0P 736996-86-4P 736996-87-5P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photosensitive polymer including fluorine for resist composition)

RN736996-80-8 CAPLUS

4-Pentenoic acid, 4,5,5-trifluoro-2-(trifluoromethyl)-, 1,1-dimethylethyl CN ester, polymer with 4-ethenyl- α , α bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

736996-76-2 CRN CMF C10 H12 F6 O2

CM

CRN 2386-82-5 CMF C11 H8 F6 O

RN 736996-81-9 CAPLUS

CN 4-Pentenoic acid, 4,5,5-trifluoro-2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenyl- α , α -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 736996-78-4 CMF C10 H15 F3 O2

CM 2

CRN 2386-82-5 CMF C11 H8 F6 O

RN 736996-82-0 CAPLUS

CN 4-Pentenoic acid, 4,5,5-trifluoro-2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,1-dimethylethyl 2-(trifluoromethyl)-2-propenoate and 4-ethenyl- α , α -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 736996-76-2 CMF C10 H12 F6 O2

CM 2

CRN 105935-24-8 CMF C8 H11 F3 O2

$$^{\mathrm{H_2C}}_{\parallel}$$
 O $_{\parallel}$ $_{\parallel}$ $_{\mathrm{F_3C-C-C-OBu-t}}$

CRN 2386-82-5 CMF C11 H8 F6 O

RN 736996-86-4 CAPLUS

CN 4-Pentenoic acid, 4,5,5-trifluoro-2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 4-ethenyl- α , α -bis(trifluoromethyl)benzenemethanol and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 736996-76-2 CMF C10 H12 F6 O2

CM 2

CRN 2386-82-5 CMF C11 H8 F6 O

CM 3

CRN 2160-89-6 CMF C6 H4 F6 O2

RN 736996-87-5 CAPLUS
CN 4-Pentenoic acid, 4,5,5-trifluoro-2-methyl-, 1,1-dimethylethyl ester,
 polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol
 and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 736996-78-4 CMF C10 H15 F3 O2

CM 2

CRN 2386-82-5 CMF C11 H8 F6 O

CM 3

CRN 2160-89-6 CMF C6 H4 F6 O2

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:635351 CAPLUS

DN 141:424972

TI A new monocyclic fluoropolymer for 157-nm photoresists

AU Sasaki, Takashi; Takebe, Yoko; Eda, Masataka; Yokokoji, Osamu; Krie,

Shigeo; Otoguro, Akihiko; Fujii, Kiyoshi; Itani, Toshiro Research Center, Asahi Glass Co., Ltd., Yokohama, 221-8755,

CS Research Center, Asahi Glass Co., Ltd., Yokohama, 221-8755, Japan SO Journal of Photopolymer Science and Technology (2004), 17(4), 639-644 CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

We earlier developed a series of fluoropolymers (FPRs) for use as AB first-generation 157-nm photoresist polymers. These FPRs have a partially fluorinated monocyclic structure and provide excellent transparency. However, their etching resistance is low (half that of conventional KrF resists) and an insufficient dissoln. rate in tetramethylammonium hydroxide (TMAH) solution To improve the characteristics of these polymers, while retaining high transparency, we had to redesign the main chain fluoropolymer structure. In this paper, we describe a new monocyclic fluoropolymer structure for a second-generation 157-nm photoresist polymer. This structure also has a fluorine atom in the polymer main chain, as well as a fluoro-containing acidic alc. group. We synthesized two types of fluoropolymers, ASF-1 and ASF-2. We found that ASF-1 had transparency of 0.18 µm-1, better than that of the FPRs, and the etching resistance was improved. Unfortunately, the dissoln. rate was poor. On the other hand, ASF-2 showed even better transparency of 0.1 µm-1, improved etching resistance, and a dissoln. rate of more than 600 nm/s, which is sufficient for use as a resist. The introduction of a protecting group (e.g., the methoxymethyl or adamantylmethoxymethyl group) to the hydroxyl group of ASF-2 can be done after the polymerization reaction. Using partially protected ASF-2 with an appropriate protecting group, we were able to fabricate a sub-60-nm line-and-space pattern.

IT 795298-32-7P 795298-39-4P 795298-41-8P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and properties of monocyclic fluoropolymers for 157-nm photoresists)

RN 795298-32-7 CAPLUS

CN 6-Hepten-2-ol, 1,1,1,6,7,7-hexafluoro-4-(2-propenyl)-2-(trifluoromethyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 795298-31-6 CMF C11 H11 F9 O

RN 795298-39-4 CAPLUS

CN 4-Pentenoic acid, 4,5,5-trifluoro-2-(2-propenyl)-, 1,1-dimethylethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 795298-38-3 CMF C12 H17 F3 O2

RN 795298-41-8 CAPLUS
CN 4-Pentenoic acid, 4,5,5-trifluoro-2-(2-propenyl)-, 1,1-dimethylethyl ester, polymer with 1,1,1,6,7,7-hexafluoro-4-(2-propenyl)-2-(trifluoromethyl)-6-hepten-2-ol (9CI) (CA INDEX NAME)

CM 1

CRN 795298-38-3 CMF C12 H17 F3 O2

CM 2

CRN 795298-31-6 CMF C11 H11 F9 O

$$\begin{array}{c} \text{CF}_2 \\ || \\ \text{F-C-CH}_2 \\ || \\ \text{H}_2\text{C} = \text{CH-CH}_2 - \text{CH-CH}_2 - \text{C-CF}_3 \\ || \\ \text{CF}_3 \end{array}$$

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 11 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
L5
AN
     2003:656722 CAPLUS
DN
     139:197936
     Halogenated monomers and amorphous polymers and their manufacture
TI
     Thomas, Brian; Zhu, Jingsong
IN
PA
     Photon-X, Inc., USA
SO
     PCT Int. Appl., 28 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                         KIND
     PATENT NO.
                                DATE
                                            APPLICATION NO.
                                                                   DATE
                         ----
                                -----
                                          -----
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                                20030821
                                            WO 2003-US4057
PΙ
     WO 2003068718
                         A2
                                                                   20030212
     WO 2003068718
                                20030925
                         A3
            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                20030925
                                           US 2003-364413
     US 2003181616
                          A1
                                                                   20030212
                          Р
PRAI US 2002-356432P
                                20020212
OS
     MARPAT 139:197936
IT
     582304-11-8P
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (fluorinated vinyl monomers for amorphous polymers)
RN
     582304-11-8 CAPLUS
CN
     1,7-Octadiene, 1,1,2,7,8,8-hexafluoro-, polymer with 1,1-difluoroethene
     (8CI, 9CI)
                (CA INDEX NAME)
     CM
     CRN
         4004-98-2
     CMF C8 H8 F6
F-C-(CH_2)_4-C-F
     CM
          2
     CRN
          75-38-7
     CMF
         C2 H2 F2
  CH<sub>2</sub>
F- C- F
L5
     ANSWER 12 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2002:487624 CAPLUS
```

Crosslinkable fluorosulfonated nitrile elastomers based on vinylidene

DN

ΤI

137:64371

```
fluoride with low glass temperature and methods for preparing same
     Ameduri, Bruno Michel; Manseri, Abdellatif; Boucher, Mario
IN
     Hydro-Quebec, Can.
PA
     PCT Int. Appl., 53 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     French
LA
FAN.CNT 1
                                            APPLICATION NO.
                                                                    DATE
                                DATE
     PATENT NO.
                         KIND
                                            -----
                                -----
                         ----
     --------------
                                20020627
                                            WO 2001-CA1439
                                                                    20011012
     WO 2002050142
                          A1
PΙ
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                          CA 2000-2328433
                                                                    20001220
                                20020620
     CA 2328433
                          AA
                                            CA 2001-2427481
                          AΑ
                                20020627
                                                                    20011012
     CA 2427481
                          A5
                                20020701
                                            AU 2002-13687
                                                                    20011012
     AU 2002013687
                                             EP 2001-981986
     EP 1355962
                          A1
                                 20031029
                                                                    20011012
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                             JP 2002-552032
                                                                    20011012
     JP 2004526000
                          T2
                                 20040826
                                            US 2003-432957
                                                                    20031106
     US 2004097675
                          Α1
                                 20040520
PRAI CA 2000-2328433
                          Α
                                 20001220
     WO 2001-CA1439
                          W
                                 20011012
os
     MARPAT 137:64371
     438627-64-6P
IT
     RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,
     engineering or chemical process); PREP (Preparation); PROC (Process)
        (rubber; crosslinkable fluorosulfonated nitrile elastomers based on
        vinylidene fluoride with low glass temperature and good heat resistance)
     438627-64-6 CAPLUS
RN
     Ethanesulfonyl fluoride, 2-[1-[difluoro[(trifluoroethenyl)oxy]methyl]-
CN
     1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-, polymer with
     1,1-difluoroethene and 5,6,6-trifluoro-5-hexenenitrile (9CI)
     NAME)
     CM
          1
          203928-94-3
     CRN
     CMF
         C6 H6 F3 N
  CF<sub>2</sub>
F-C-(CH_2)_3-CN
     CM
          2
```

16090-14-5

C7 F14 O4 S

CRN CMF

hydrolyzed 249935-44-2P 253432-98-3P

fluorinated olefins)

231963-66-9 CAPLUS

RN

RL: IMF (Industrial manufacture); PREP (Preparation)

(functional trifluorovinyl monomers and their copolymn. with

```
4-Penten-1-ol, 4,5,5-trifluoro-, polymer with tetrafluoroethene (9CI) (CA
CN
     INDEX NAME)
     CM
           1
     CRN 109993-33-1
     CMF C5 H7 F3 O
   CF<sub>2</sub>
F-C-(CH_2)_3-OH
     CM
           2
     CRN 116-14-3
     CMF C2 F4
RN
     237392-99-3 CAPLUS
CN
     4-Penten-1-ol, 4,5,5-trifluoro-, acetate, polymer with 1,1-difluoroethene
           (CA INDEX NAME)
     CM
          1
     CRN 219866-33-8
     CMF C7 H9 F3 O2
   CF<sub>2</sub>
F-C-(CH_2)_3-OAC
          2
     CM
     CRN 75-38-7
     CMF C2 H2 F2
  CH<sub>2</sub>
F- C- F
RN
     249935-44-2 CAPLUS
CN
     Ethanethioic acid, S-(4,5,5-trifluoro-4-pentenyl) ester, polymer with
     1,1-difluoroethene (9CI) (CA INDEX NAME)
     CM
          1
     CRN 249935-40-8
     CMF C7 H9 F3 O S
```

CMF C2 F4

```
CM
          3
     CRN
          115-07-1
     CMF
         C3 H6
H_3C-CH=CH_2
RE.CNT 7
              THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 14 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
L5
     1999:721381 CAPLUS
AN
DN
     132:79624
TI
     Synthesis and polymerization of fluorinated monomers bearing a reactive
     lateral group-part 8-study of the tetrafluoroethylene-propylene rubber
     modification by 4,5,5-trifluoro-4-penten-1-ol as a comonomer
     Ameduri, B.; Boutevin, B.; Kostov, G.; Petrov, P.; Petrova, P.
ΑU
     ESA 5076, Laboratory of Macromolecular Chemistry, Ecole Nationale
CS
     Superieure de Chimie, Montpellier, 34296, Fr.
     Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(21),
SO
     3991-3999
     CODEN: JPACEC; ISSN: 0887-624X
PB
     John Wiley & Sons, Inc.
DT
     Journal
LA
     English
IT
     253432-98-3P, Tetrafluoroethylene-propylene-4,5,5-trifluoro-4-
     penten-1-ol copolymer
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (rubber; tetrafluoroethylene-propylene rubber modification by
        4,5,5-trifluoro-4-penten-1-ol comonomer)
RN
     253432-98-3 CAPLUS
CN
     4-Penten-1-ol, 4,5,5-trifluoro-, polymer with 1-propene and
     tetrafluoroethene (9CI) (CA INDEX NAME)
     CM
          1
     CRN
         109993-33-1
     CMF C5 H7 F3 O
```

$$||$$
 F-C-(CH₂)₃-OH

CRN 116-14-3 CMF C2 F4

```
CM
          3
         115-07-1
     CRN
     CMF C3 H6
H_3C-CH-CH_2
RE.CNT 42
              THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 15 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
L5
AN
     1999:625772 CAPLUS
DN
     Synthesis and polymerization of fluorinated monomers bearing a reactive
TI
     lateral group. Part 10. Copolymerization of vinylidene fluoride (VDF) with
     5-thioacetoxy-1,1,2-trifluoropentene for the obtaining of a novel PVDF
     containing mercaptan side-groups
     Ameduri, Bruno; Boutevin, Bernard; Kostov, Georges K.; Petrova, Petya
ΑU
     ESA 5076, Ecole Nationale Superieure de Chimie, Montpellier, 34296, Fr.
CS
     Designed Monomers and Polymers (1999), 2(4), 267-285
SO
     CODEN: DMPOF3; ISSN: 1385-772X
PB '
     VSP BV
DT
     Journal
LA
     English
     249935-44-2P, 1,1,2-Trifluoro-5-thioacetoxypentene-vinylidene
IT
     fluoride copolymer
     RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN
     (Synthetic preparation); PREP (Preparation); PROC (Process)
        (preparation of fluorinated thioacetoxy-containing monomers and copolymn.
with
        vinylidene fluoride to obtain thiol-containing fluoropolymer subsequently
        crosslinked with hexadiene)
     249935-44-2 CAPLUS
RN
     Ethanethioic acid, S-(4,5,5-trifluoro-4-pentenyl) ester, polymer with
CN
     1,1-difluoroethene (9CI) (CA INDEX NAME)
     CM
          1
     CRN 249935-40-8
     CMF C7 H9 F3 O S
  CF<sub>2</sub>
F-C-(CH_2)_3-SAC
```

2

CRN 75-38-7 CMF C2 H2 F2

IT 249935-45-3DP, hydrolyzed, crosslinked polymers with 1,5-hexadiene

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of fluorinated thioacetoxy-containing monomers and copolymn.

with

vinylidene fluoride to obtain thiol-containing fluoropolymer subsequently crosslinked with hexadiene)

RN 249935-45-3 CAPLUS

CN 4-Pentene-1-thiol, 4,5,5-trifluoro-, polymer with 1,1-difluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 249935-42-0 CMF C5 H7 F3 S

CM 2

CRN 75-38-7 CMF C2 H2 F2

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:394003 CAPLUS

DN 131:45226

TI Epoxides containing a perfluorovinyl group and polymers made from them

N Hung, Ming-hong; Rozen, Shlomo

PA E. I. Du Pont de Nemours & Co., USA

SO U.S., 4 pp., Cont. of U.S. Ser. No. 991,401.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

I. MIN	· CIVI I				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PΙ	US 5914412	Α	19990622	US 1994-243428	19940516
	US 6028165	Α	20000222	US 1999-277939	19990329
PRA	I US 1990-530376	A1	19900430		
	US 1992-991401	A1	19921215		
	US 1994-243428	A3	19940516		
IT	227319-32-6P				
	DI. TME /Industria	l manuf	atural. DDE	D /Dronaration)	

RL: IMF (Industrial manufacture); PREP (Preparation)

(epoxides containing a perfluorovinyl group and polymers)

RN 227319-32-6 CAPLUS

CN Oxirane, (5,6,6-trifluoro-5-hexenyl)-, homopolymer (9CI) (CA INDEX NAME)

CRN 133373-38-3 CMF C8 H11 F3 O

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 17 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN L5

AN 1999:371598 CAPLUS

DN 131:158046

Synthesis and Polymerization of Fluorinated Monomers Bearing a Reactive TI Lateral Group. 9. Bulk Copolymerization of Vinylidene Fluoride with 4,5,5-Trifluoro-4-ene Pentyl Acetate

Ameduri, Bruno; Bauduin, Gerard; Boutevin, Bernard; Kostov, Georges; ΑU Petrova, Petya

Laboratory of Macromolecular Chemistry, ESA (5076) CNRS Ecole Nationale CS Superieure de Chimie de Montpellier, Montpellier, 34296, Fr.

SO Macromolecules (1999), 32(14), 4544-4550 CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

English LA

IT 237392-99-3P, 4,5,5-Trifluoro-4-penten-1-yl acetate-vinylidene fluoride copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and characterization of)

RN237392-99-3 CAPLUS

CN4-Penten-1-ol, 4,5,5-trifluoro-, acetate, polymer with 1,1-difluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 219866-33-8 CMF C7 H9 F3 O2

$$||^{CF_2}$$

 $||^{F-C-(CH_2)_3-OAC}$

CM 2

CRN 75-38-7 CMF C2 H2 F2

RE.CNT THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 18 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
     1999:346616 CAPLUS
AN
     131:102605
DN
     Synthesis and polymerization of fluorinated monomers bearing a reactive
ΤI
     lateral group. Part 7. Copolymerization of tetrafluoroethylene with
     ω-hydroxy trifluorovinyl monomers
     Ameduri, Bruno; Bauduin, Gerard; Kostov, Georges K.; Petrova, Petya;
ΑU
     Rousseau, Alain
     Ecole Nationale Superieure de Chimie, Montpellier, 34296, Fr.
CS
     Journal of Applied Polymer Science (1999), 73(2), 189-202
so
     CODEN: JAPNAB; ISSN: 0021-8995
PΒ
     John Wiley & Sons, Inc.
DT
     Journal
     English
LA
     231963-66-9P, Tetrafluoroethylene-4,5,5-trifluoro-4-penten-1-ol
IT
     copolymer
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (preparation, characterization and properties of)
RN
     231963-66-9 CAPLUS
     4-Penten-1-ol, 4,5,5-trifluoro-, polymer with tetrafluoroethene (9CI)
CN
                                                                             (CA
     INDEX NAME)
     CM
          1
     CRN
         109993-33-1
     CMF C5 H7 F3 O
  CF_2
F-C-(CH_2)_3-OH
          2
     CM
     CRN
         116-14-3
     CMF
        C2 F4
```

=>

RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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C:\Program Files\Stnexp\Queries\719651a.str
chain nodes :
                                  24 25
                                          26 45 46 47
   1 2 3 4
             5 6 7 8
                        9 22
                               23
                                                        48
                                                            49
                                                               50
                                                                   51
                                                                      53
```

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57 58 59
                60 61
                        62
                             63
                                  64
                                      65
                                             67
                                                           70
                                                               77
                                                                    78
                                          66
                                                   68
                                                       69
ring nodes :
            13
                14
                    15
                         16
                             17
                                  18
                                      19
                                          20
                                              21
                                                  31
                                                       32
                                                           33
                                                               34
                                                                   35
                                                                        36
                                                                            37
                                                                                     39
                                                                                         40
                                                                                             41
    11 12
                                                                                 38
chain bonds :
                         5-77 5-78 6-7 6-8
54-56 55-57 56-58
                                                             23-24 24-25
    1-2 2-3 2-4
                    3-5
                                                8-45
                                                       22-23
                                                                             25-26
                                                                                     46-47
                                                                                            46-48
    48-51 49-50 49-53
                                                56-59 56-62 57-60 57-61 57-63 63-66 64-66
          65-67
                   67-68
                          67-69
    65-66
                                  67-70
ring bonds
                          13-14
                                  14-15
    11-12
                   12-13
                                         15-16
                                                17-18
                                                        17-21
                                                               18-19
                                                                       19-20 20-21 31-32
                                                                                             31-36
    32-33
           33-34 34-35
                         35-36
                                 37-38 37-41
                                                 38-39
                                                        39-40
                                                                40-41
exact/norm bonds :
    23-24
           56-62
exact bonds
              2-4
                   3-5 5-77 5-78 6-7 6-8
18-19 19-20 20-21 22-23
    1-2 2-3
                                                 8-45 11-12 11-16 12-13
                                                                             13-14 14-15
                                                                                            15-16
                                                24-25
46-47
    17-18 17-21
                                                       25-26 31-32
46-48 48-51
                                                                       31-36
49-50
                                                                              32-33
                                                                                      33-34
                                                                                             34-35
                                                                              49-53
    35-36
            37-38
                                  39-40
                   37-41
                          38-39
                                                                                      54-56
                                         40-41
                   57-60
                          57-61
                                 57-63
    56-58
            56-59
                                         63-66
                                                64-66 65-66
                                                               65-67
                                                                       67-68
                                                                               67-69
                                                                                      67-70
G2:[*1],[*2],[*3],[*4],[*5],[*6]
G3:CN, [*7], [*8], [*9], [*10], [*11]
```

```
Match level:
          9:CLASS
   1:CLASS
                                                                      11:Atom
   12:Atom
                                                              20:Atom
                                                                      21:Atom
   22:CLASS
           23:CLASS 24:CLASS 25:CLASS 26:CLASS 31:Atom 32:Atom 34:Atom
   35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 45:CLASS 46:CLASS 47:CLASS
                            51:CLASS 53:CLASS 54:CLASS 55:CLASS 56:CLASS
                   50:CLASS
                                                                     57:CLASS
           49:CLASS
           59:CLASS
                   60:CLASS
                            61:CLASS
                                    62:CLASS
                                            63: CLASS
                                                     64:CLASS 65:CLASS
   58:CLASS
   67:CLASS
           68:CLASS
                   69:CLASS
                            70:CLASS
                                   77:CLASS
                                            78:CLASS
Element Count :
```

Node 9: Limited .C,C1-10

Node 78: Limited C,C1-5